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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,064	02/14/2002	Hu Yang	2039.011100/RFE (210145US)	8510
37774	7590	06/30/2005	EXAMINER	
WILLIAMS, MORGAN & AMERSON, P.C. 10333 RICHMOND, SUITE 1100 HOUSTON, TX 77042			ANTHONY, JOSEPH DAVID	
			ART UNIT	PAPER NUMBER
			1714	
DATE MAILED: 06/30/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/076,064

Applicant(s)

YANG ET AL.

Examiner

Joseph D. Anthony

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 and 25-32 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-10, 16-22 and 24 is/are allowed.
- 6) ☒ Claim(s) 11-15 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11, 13-15 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 is indefinite because the definition of the "A" group is confusing due to applicant's use of ";" instead of --,--. Applicant should also use proper Markush claim language (i.e. selected from the group consisting of) to overcome this confusion.

Claims 13-15 and 23 are indefinite because there is insufficient antecedent basis for the phrase "the oxygen barrier layer" from the base claims from which these dependent claims are dependent from.

### ***Allowable Subject Matter***

3. Claims 7-10, 16-22 and 24 are allowed because there is no prior-art reference(s) either alone or in combination that would motivate one having ordinary skill in the art to make applicant's claimed oxygen barrier packaging article comprising: 1) an oxygen scavenging polymer comprising structure I, 2) a transition metal oxidation catalyst, and 3) an energy-absorbing compound. Important prior-art references to be noted here are as followed.

Degrassi et al. U.S. Patent Number 5,716,715 teach a polymeric film having superior oxygen barrier properties comprising at least five layers with at least one exterior layer comprised of polyester, one exterior layer selected from the group consisting of a polyester, an aliphatic polyamide, and an aliphatic/aromatic polyamide, an interior layer of ethylene vinyl alcohol copolymer or a blend of an ethylene vinyl alcohol copolymer and an aliphatic/aromatic polyamide, and a modified polyolefin adhesive layer between each exterior layer and the interior layer, see abstract, Degrassi et al does give motivation to make a polyester polymer that comprises applicant's structure I, as set forth in applicant's independent claim 7, because aromatic diols, such as p-xylene glycol, are disclosed as reactants for di-acids, such as adipic acid and terephthalic acid, see column 3, lines 16-42 and column 3, line 66 to column 4, line 39. Nevertheless, Degrassi et al does not disclose or suggest that such esters or any esters according to their invention function as oxygen scavengers. Rather, the polyesters are used as oxygen barrier layers. In any case, Degrassi et al has no disclosure of any kind to the further addition of applicant's required transition metal oxidation catalyst, and energy-absorbing compound. Said lack of disclosure is a critical defect in Degrassi et al's disclosure because one having ordinary skill in the art would readily know that at least the transition metal oxidation catalyst is a necessary addition in order for a polyester polymer comprising applicant's structure I to actually function as an oxygen scavenging polymer and not just as an oxygen barrier polymer. Although many other prior-art

patents teach the use of transition metal oxidation catalyst and energy-absorbing compounds (e.g. photoinitiators) in combination with oxygen scavenging polymers, there is just no motivation to add such components to the polyester oxygen barrier polymers disclosed by Degrassi et al..

Gelles et al. U.S. Patent Number 4,868,243, Taira et al. U.S. patent Number 4,735,835 and Kajita et al. U.S. Patent Number 5,496,496 all disclose polymers or copolymers that could comprise applicant's structure I of the independent claim 7 if one selected certain reactants from the large lists of diols and diacids reactants. But once again such references do not have any motivation to add applicant's required additional components of a transition metal oxidation catalyst, and an energy-absorbing compound to these potential polymers. In any case, none of these patents is concerned with oxygen scavenging polymers.

***Prior-Art Cited But Not Applied***

4. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

***Examiner Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's

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supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (703) 872-9306. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.

A handwritten signature in black ink, appearing to read "Joseph D. Anthony", with a long horizontal flourish extending to the right.

**Joseph D. Anthony**  
**Primary Patent Examiner**  
**Art Unit 1714**

6/25/05